number of species must be limited, but the number of individuals developed in a short time may be enormous; they will be mostly plants of very rapid development and of short life, and mostly of quite low organization; some plants, common in the subarctic waters may here assume a sudden luxuriance (*Chondrus*); some may also appear on a different substratum (*Ralfsia*); some may take on a habit so distinct as to be considered a separate species native to lower latitudes (*Chaetomorpha*).

MALDEN, MASSACHUSETTS.

A TRIP TO KILLINGLY, CONNECTICUT.

CLARENCE H. KNOWLTON.

AFTER considering several other places for a one-day botanical excursion, Mr. L. J. Spalding and I finally decided on Killingly, Windham county, Conn. We were led to this by a study of the map, which revealed a diversified region ranging in elevation from 280 to 875 feet above sea-level, with brooks, ponds and hills. A previous reconnoissance in July, 1903, had shown us that the underlying rocks were sandstone and quartzite. We had also noted and collected several interesting plants at that time.

The day chosen (Aug. 23, 1908) was clear and cool after heavy rainfall, the vegetation was fresh, and walking easy. We left the cars at Attawaugan, and the first plant collected was *Commelina communis* L. It grew luxuriantly in the woods near Five-Mile River, on a bank which had been used as a dump at some time previous. The delicate blue flowers were still open, and the plant seemed to flourish in its adopted home.

The next accession grew abundantly in the millyard and by the roadside at Ballouville. This was *Euphorbia hirsuta* Wiegand, easily distinguishable from its nearest relative by its hairy stem, smooth fruit and peculiar seed. These specimens were not so nearly prostrate as *E. maculata* L. usually is.

We now left the villages and explored a large meadow, part of which had been mowed. In this part grew good specimens of *Parnassia Caroliniana* Michx., just coming into flower. In the uncut portion, along with many common plants, were *Pycnanthemum linifolium*,

Pursh, *P. lanceolatum* Pursh, and *P. muticum* Pers., all these closely allied species occupying the same territory, and showing no choice in the matter of soil or moisture. Later in the day we found the fourth New England representative of the genus, *P. incanum* Michx., growing in dry rocky woods. The prevailing alder in this meadow and throughout the town seems to be *Alnus incana* Willd., for I did not see any other during the entire day. *Calamagrostis Nuttalliana* Steud. also flourished in this meadow.

The road led from the lowland up the side of Break Neck Hill, and wayside glimpses of *Circaea alpina* L., the true *Viola blanda* of Willdenow, and big clumps of *Collinsonia canadensis* L. led to an investigation of the rich woods near by. The *Collinsonia* is a frequent plant throughout the region in such woods, and its presence was not unexpected, but further search showed an abundance of *Allium tricoccum* Ait., in excellent fruit, *Adiantum pedatum* L., *Galium lanceolatum* Torr., *Eupatorium ageratoides* L., *Sanguinaria canadensis* L., *Trillium cernuum* L., *Uvularia perfoliata* L. and mountain laurel. The woods were largely red oak, chestnut, cherry birch and sugar maple. Part had been cut over within ten years, while the other part had not felt the axe for at least forty, but there was little difference in the herbaceous flora beneath their shade.

Further up the hill were open pastures and clearings, with ledges which gave fine views of neighboring villages, and the level sky-line of the Windham county hills. Over the dry ledges grew *Woodsia obtusa* Torr. and the more common ebony spleenwort, while in moist shaded crevices grew *Asplenium Trichomanes* L. The dry clearings were full of *Gerardia quercifolia* Pursh in full bloom, very tall and handsome. *G. flava* L., *G. pedicularia* L. and *G. tenuifolia* Vahl were also present, but only the latter was abundant. *G. paupercula* (Gray) Britton we had found in our first swamp. Along with these were some very fine specimens of *Hieracium Gronovii* L., two or three feet high, and on one ledge in the hot sunshine grew *Muhlenbergia glomerata* Trin., undismayed by changed environment.

Down beyond the clearings was another stretch of rich woods, colder and more moist than the first, and here came the greatest surprises of the day. First of all was *Habenaria Hookeriana* Gray, with broad flat leaves and spikes of appressed green flowers, and fruit. Further search for this revealed as its neighbors *H. bracteata* R. Br. and *Corallorrhiza multiflora* Nutt., also well fruited, and several

specimens of each were collected, without seriously affecting the supply. There were also good colonies of *Monotropa Hypopitys* L., bright scarlet instead of golden yellow, their prevailing color. Along a brook were splendid plants of *Phegopteris hexagonoptera* Fée, only waiting the hand of the collector to transfer their beauty to the herbarium.

Reluctantly we left these woods, and investigated some of the mill-ponds beyond East Killingly, near the Rhode Island line. Two of these were well filled with *Myriophyllum ambiguum* Nutt., var. *capillaceum*, Torr. & Gray, while *Brasenia* was the prevailing plant in the others. The largest pond, Chestnut Hill Reservoir, was covered with the peltate leaves, which concealed the water and gave a peculiar leathery effect to its surface. I finally secured a specimen of this slimy plant, with leaves uneaten by the insects. Along the roadside thickets near the ponds were large quantities of *Apios tuberosa* Moench both in flower and fruit, and occasional plants of *Solidago Elliottii* T. & G. just coming into bloom.

Our next point was a steep unnamed hill near Elliotville, which we had visited in 1903. The eastern side of this is a big cliff of slightly metamorphosed sandstone, varying from 20 to 60 feet in height, with its white escarpment broken by fracture planes and caves, far surpassing in natural interest the more famous Wolf Den region of Israel Putnam in the adjoining town of Pomfret. In the woods here grew an abundance of *Clematis verticillaris* DC. and *Oryzopsis melanocarpa* Muhl. The westerly side of the hill proved ordinary and uninteresting, except for a curious side-hill peat-bog, caused probably by some hidden spring. Mr. Spalding has since found a large tree of *Betula papyrifera* Marsh on the southwest corner of this hill.

Whetstone Brook flows through the little valley below, on its way to join the Quinebaug River. In one of its tributaries grew *Sium Carsonii* Durand, but it did not seem to flourish in the main brook, where the water was too deep or the current too swift for this lazy degenerate of a worthy type. The brook gets its name from the easily cleaving, fine-grained sandstone of the region, and flows through rather ordinary meadows full of *Carex stricta* Lam., to the exclusion of most other species. There were fine colonies of *Sparganium americanum* Nutt. in some places, and in others there were *Xyris flexuosa* Muhl., *Peltandra*, *Decodon*, and *Rhexia*. At our 1903 visit we found large quantities of *Ranunculus aquatilis* L. var. *trichophyllus* Gray,

exceptionally large specimens, but we did not find it this time, probably because it was too late. *Lonicera caerulea* L. is a frequent shrub along the meadows.

Our last collecting for the day was in Putnam, Conn., where we excited the distrust of the natives by groping successfully in the dusk of early nightfall for *Vernonia noveboracensis* Willd., and *Liatris scariosa*, Willd., conspicuous plants which we had located on the morning journey, and reserved for our homeward way.

All in all, we considered the day a very successful and enjoyable one, and the region well worth further exploration. Most of the plants mentioned are represented by specimens in my collection or Mr. Spalding's, and although but few are distinctly rare, many of them belong in that larger class so well known to botanists as "interesting."

I am indebted to Mr. Walter Deane for kindly assistance in identifying the *Myriophyllum* and the *Sparganium*.

Boston, Massachusetts.

Four Introduced Plants at Cambridge, Massachusetts.—On 31 July of this year I noted, beneath a hedge-row along a street in Cambridge, a specimen of *Neslia paniculata* (L.) Desv., a crucifer with small, globose, indehiscent, reticulated silicles. The specimen was a small one but the distinctive fruit made it easily determinable. I have gathered it in better condition and greater abundance on docks at Quebec, 31 August, 1904. *Thymus Serpyllum* L. was found in abundance in a plot of grass land in Cambridge on 23 July of this year, and on 8 August another patch about a half-mile away, across the Charles River, near Soldiers' Field in Brighton. On 8 August I came across a bush of *Colutea arborescens* L. escaped by a roadside near Mt. Auburn Cemetery. *Epilobium hirsutum* L. is well established near Glacialis Pond, Cambridge. Specimens of these plants are in my herbarium.—Arthur Stanley Pease, Cambridge, Massachusetts.

New Edition of Gray's Manual.—We have received just as we are going to press the seventh edition (illustrated) of Gray's Manual,[1] which will be reviewed in a subsequent issue of Rhodora.

[1] A Handbook of the Flowering Plants and Ferns of the central and northeastern United States and adjacent Canada rearranged and extensively revised by Benjamin Lincoln Robinson and Merritt Lyndon Fernald. American Book Co., New York. $2.50.